

In the Claims

This listing of claims will replace all prior versions and listings of claims in the above-identified application.

1-17. (Canceled)

18. (Currently Amended) A method comprising:

executing one or more tasks within each of a plurality of nodes of a network to generate:

first data identifying at least one node of said plurality of nodes at which,

~~a node of said plurality of nodes on which insert data is added,~~

wherein said insert data is data associated with said each of said plurality of nodes ~~is added to said network,~~ and

~~a node of said plurality of nodes on which erase data is deleted,~~

wherein said erase data is data associated with said each of said plurality of nodes ~~is dropped from said network,~~ and

second data indicating a format of in-transit data ~~on being transmitted over~~ said network[.];

identifying a destination node of said in-transit data; and

transmitting said in-transit data to said destination node using said first data and said second data.

19. (Previously Presented) The method of claim 18, further comprising:

identifying said plurality of nodes of said network.

20. (Currently Amended) The method of claim 19, wherein said plurality of nodes are interconnected by one or more links and ~~said executing one or more tasks within each of said plurality of nodes of said network to generate said second data comprises:~~

~~executing one or more task[s] within each of a plurality of nodes of a network to generate~~ said second data is configured to indicate ~~indicating~~ a format of in-transit data ~~on being transmitted over~~ said one or more links.

21. (Currently Amended) The method of claim 19, wherein said insert data and said erase data associated with said each of said plurality of nodes comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted ~~by~~ over said each of said plurality of nodes to said network.
22. (Currently Amended) The method of claim 19, wherein said executing comprises requesting at least one of:  
said insert data from said node of said plurality of nodes at which insert data is being added; and  
said erase data from said node of said plurality of nodes at which erase data is being deleted.  
~~from at least requesting one other node of said plurality of nodes, data indicating what data are added or dropped on said at least one other node of said plurality of nodes.~~
23. (Currently Amended) The method of claim 20, wherein said executing comprises: requesting, from at least one other node of said plurality of nodes, ~~data indicating~~ a format of data ~~on~~ over a link of said one or more links attached to said at least one other node of said plurality of nodes.
24. (Currently Amended) The method of claim 23, wherein said requesting comprises: requesting ~~data indicating~~ at least one of a synchronous transport signal type data and a synchronous transport module type data.
25. (Currently Amended) The method of claim 20, wherein said network satisfies at least one of: ~~a first condition and a second condition, wherein,~~  
~~said a first condition comprises that wherein, to prevent misconnection~~ in case of failure, traffic ~~can be~~ is:  
switched by dispatching said in-transit data from a failed link to a redundant link and  
squelched between said one or more links, ~~and when said traffic is switched, said traffic can be squelched to prevent misconnection,~~ and

~~said a~~ second condition ~~comprises that~~ wherein said in-transit data on being transmitted over each of said one or more links is are re-transmitted in data buckets to at least one predetermined node from said network at regular intervals of time each of said data buckets being re-transmitted at regular intervals of time, each of said data buckets, when re-transmitted, being dropped on a predetermined one or more nodes from said network.

26. (Previously Presented) The method of claim 25, wherein,  
said network satisfies said first condition, and  
said executing one or more tasks within each of said plurality of nodes to generate said first data comprises,  
performing squelching to prevent misconnection.
27. (Currently Amended) The method of claim 25, wherein,  
said network satisfies said second condition, and  
said executing one or more tasks within each of said plurality of nodes to generate said first data comprises,  
for each data bucket, identifying at least one of:  
at least one of said plurality of nodes on which insert data is being added via  
said each data bucket ~~is added to the network[,];~~ and/or  
at least one of said plurality of nodes on which erase data is being deleted via  
said each data bucket ~~is dropped from the network.~~
28. (Currently Amended) The method of claim 19, further comprising:  
detecting a failure on a first link of said one or more links on said node of said plurality of nodes communicating said in-transit data;  
identifying a redundant link from said node communicating said in-transit data to said destination node; and  
switching traffic in response to said detecting by switching said in-transit data from said first link to said redundant a second link of said one or more links by in response to said detecting.

29. (Previously Presented) The method of claim 28, wherein said executing one or more tasks within each of said plurality of nodes comprises executing said one or more tasks within each of said plurality of nodes before said failure occurs.

30. (Currently Amended) An apparatus comprising:  
means for identifying a plurality of nodes of a network, wherein said plurality of nodes are interconnected by one or more links; and  
means for executing one or more tasks within each of said plurality of nodes to generate:  
first data identifying at least one node of said plurality of nodes at which ~~of,~~  
~~a node of said plurality of nodes on which insert data is added,~~  
wherein said insert data is data associated with said each of said plurality of nodes ~~is added to said network,~~ or  
~~a node of said plurality of nodes on which erase is deleted, wherein~~  
said erase data is data associated with said each of said plurality of nodes ~~is dropped from said network; and~~  
second data indicating a format of in-transit data ~~on~~ being transmitted over said one or more links;  
means for identifying a destination node of said in-transit data; and  
means for transmitting said in-transit data to said destination node using said first data and said second data.

31. (Currently Amended) The apparatus of claim 30, wherein said insert data and said erase data ~~associated with said each of said plurality of nodes~~ comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes to said network.

32. (Currently Amended) The apparatus of claim 31, wherein said means for executing comprises:  
means for requesting, said insert data from said node of said plurality of nodes at which insert data is being added; and  
means for requesting said erase data from said node of said plurality of nodes at which erase data is being deleted.

~~from at least one other node of said plurality of nodes, data indicating what data are added or dropped on said at least one other node of said plurality of nodes.~~

33. (Currently Amended) The apparatus of claim 31, wherein said means for executing comprises:

means for requesting, from at least one other node of said plurality of nodes, ~~data~~ **indicating** a format of data ~~on being transmitted over~~ a link of said one or more links attached to said at least one other node of said plurality of nodes.

34. (Currently Amended) The apparatus of claim 33, wherein said means for requesting comprises:

means for requesting ~~data indicating~~ at least one of a synchronous transport signal type **data** and a synchronous transport module type **data**.

35. (Currently Amended) The apparatus of claim 31, wherein said network satisfies at least one of: ~~a first condition and a second condition, wherein,~~

~~said a first condition comprises that~~ **wherein, to prevent misconnection** in case of failure, traffic ~~can be~~ **is**:

**switched by dispatching said in-transit data from a failed link to a redundant link and**

**squelched** between said one or more links, ~~and when said traffic is switched, said traffic can be squelched to prevent misconnection;~~ and

~~said a second condition comprises that~~ **wherein said in-transit data on being transmitted over** each of said one or more links **is are re-transmitted** in data buckets to **at least one predetermined node from said network at regular intervals of time** ~~each of said data buckets being re-transmitted at regular intervals of time, each of said data buckets, when re-transmitted, being dropped on a predetermined one or more nodes from said network.~~

36. (Previously Presented) The apparatus of claim 35, wherein,  
said network satisfies said first condition, and  
said means for executing one or more tasks within each of said plurality of nodes to  
generate said first data comprises,  
means for performing squelching to prevent misconnection.
37. (Currently Amended) The apparatus of claim 35, wherein,  
said network satisfies said second condition, and  
said means for executing one or more tasks within each of said plurality of nodes to  
generate said first data comprises, for each data bucket, means for identifying:  
at least one of said plurality of nodes on which insert data is being added via  
said each data bucket ~~is added to the network[,]~~ ; and/or  
at least one of said plurality of nodes on which erase data is being deleted via  
said each data bucket ~~is dropped from the network~~.
38. (Currently Amended) The apparatus of claim 31, further comprising:  
means for detecting a failure on a first link of said one or more links on said node of said  
plurality of nodes communicating said in-transit data;  
means for identifying a redundant link from said node communicating said in-  
transit data to said destination node; and  
means for switching traffic in response to said detecting by switching said in-transit  
data from said first link to said redundant ~~a second link of said one or more~~  
~~links in response a detection of a failure on said first link~~.
39. (Previously Presented) The apparatus of claim 38, wherein said means for executing one  
or more tasks within each of said plurality of nodes comprises means for executing said one or  
more tasks within each of said plurality of nodes before said failure occurs.

40. (Currently Amended) A network node comprising:  
 an interface to couple said network node to a network, wherein said network comprises a plurality of nodes interconnected by one or more links and said plurality of nodes comprises said network node;  
 a timing communications and control processor configured to:  
   identify said plurality of nodes, and  
   execute one or more tasks within network node to generate:  
     first data identifying at least one node of said plurality of nodes at which,  
       ~~a node of said plurality of nodes on which~~ insert data is added,  
       wherein said insert data is data associated with said each  
       of said plurality of nodes ~~is added to said network,~~ and  
       ~~a node of said plurality of nodes on which~~ erase data is deleted,  
       wherein said erase data is data associated with said each of  
       said plurality of nodes ~~is dropped from said network,~~ and  
     second data indicating a format of in-transit data on being transmitted  
     over said one or more links;  
   identify a destination node of said in-transit data; and  
   communicate said in-transit data to said destination node using said first  
   data and said second data.
41. (Currently Amended) The network node of claim 40, wherein said data associated with said each of said plurality of nodes comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes over said network.

42. (Currently Amended) The network node of claim 41, wherein said timing communications and control processor configured to execute one or more tasks comprises:  
a timing communications and control processor configured to:  
request, from at least one other node of said plurality of nodes, said insert data from said node of said plurality of nodes at which insert data is being added and said erase data from said node of said plurality of nodes at which erase data is being deleted ~~data indicating what data are added or dropped on said at least one other node of said plurality of nodes.~~
43. (Currently Amended) The network node of claim 41, wherein said timing communications and control processor configured to execute one or more tasks comprises:  
a timing communications and control processor configured to:  
request, from at least one other node of said plurality of nodes, ~~data indicating~~ a format of data on being transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes.
44. (Currently Amended) A machine-readable storage medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed are configured to cause said machine to perform a method comprising:  
identifying a plurality of nodes of a network, wherein said plurality of nodes are interconnected by one or more links; and  
executing one or more tasks within each of said plurality of nodes to generate:  
first data identifying at least one of,  
a node of said plurality of nodes on which data associated with said each of said plurality of nodes is added to said network, and  
a node of said plurality of nodes on which data associated with said each of said plurality of nodes is dropped from said network, and  
second data indicating a format of data ~~on~~ being transmitted over said one or more links;  
identifying a destination node of said in-transit data; and



**communicating said in-transit data to said destination node using said first data and said second data.**

45. (Currently Amended) The machine-readable **storage** medium of claim 44, wherein **said insert data and said erase data** ~~associated with said each of said plurality of nodes~~ comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes to said network.

46. (Currently Amended) The machine-readable **storage** medium of claim 45, wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, **said insert data from said node of said plurality of nodes at which insert data is being added and said erase data from said node of said plurality of nodes at which erase data is being deleted** ~~data indicating what data are added or dropped on said at least one other node of said plurality of nodes.~~

47. (Currently Amended) The machine-readable **storage** medium of claim 45, wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, data indicating a format of data ~~on~~ **being transmitted over** a link of said one or more links attached to said at least one other node of said plurality of nodes.